

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

690 Walnut Ave.St. 150

Vallejo, CA 94592-1133

(707) 649-5453

(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027633**Date Inspected:** 18-May-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** As noted below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

13E Drop-In Panels (Interior)

This QA Inspector observed ABF welders noted below performing 4G (overhead position) Shielded Metal Arc Welding (SMAW) on the Seismic Performance Critical Member (SPCM) Complete Joint Penetration (CJP) splice butt joint using 3.2mm E7018-H4R electrodes with amperage of 127. This welding was in progress for the duration of the shift. The welding consists of back fill passes at the 13E-A.1 location by Edward Brown (ID 9331) 13E-A2.8 by Salvador Sandoval (ID 2202) 13E-E2.3 by Khit Lounechaney (ID 4985) and 13E PP122.2 by Steven Davis (ID 7889). QC Inspector Sal Merino was observed monitoring the welding parameters for compliance to ABF-WPS-D1.5-1040C-CU Revision 0 and measuring inter-pass temperatures between passes. This QA Inspector verified that the electrodes were stored in electric rod ovens and appeared to be in accordance with AWS D1.5 Section 4.5.2 and exposure rates appeared to be in accordance with AWS D1.5 Table 4.7. During subsequent observations it was noted that the welders were using a power disc grinder and/or rotary die grinders at weld starts and stops as needed and were cleaning between weld passes with power wire wheel brushes.

12E PP109.5 E2-DAH (Interior)

This QA Inspector randomly observed ABF welder Mike Jimenez (ID 4671) performing the back-gouge

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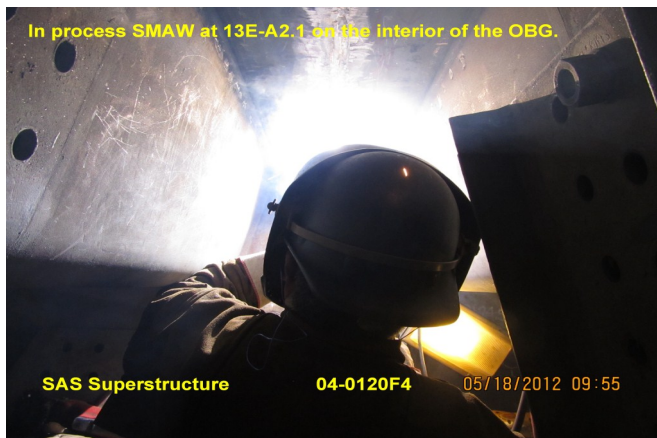
operation of ultrasonic rejectable indications on the Deck Access Hole (DAH) at 12E PP109.5 E2 located at y+ 240 mm: 110mm in length, 15mm wide and 7mm deep, y+ 1195mm: 65mm in length, 15mm wide and 6mm deep, y+2000mm: 110mm in length, 15mm wide and 10mm deep, y+2735mm: 50mm in length, 15mm wide and 8mm deep, y+2830mm: 60mm in length, 15mm wide and 8mm deep, y+4220mm: 40mm in length, 10mm wide and 5mm deep. This QA Inspector observed QC Inspector Sal Merino perform a Magnetic Particle Inspection (MT) of the excavation to determine the soundness of the metal. Upon completion of the testing this QA Inspector observed that no rejectable indications were present. This QA Inspector randomly observed the welder performing the repair welding operation of six (6) ultrasonic indications as per the SMAW process in the (4G) overhead position on the DAH located at 12E PP109.5 E2. This QA Inspector observed the use of E7018-H4R electrodes and QC Inspector Sal Merino verify that the preheat temperature was at least the minimum required and that the welding parameters were in accordance with WPS D1.5-1001- Repair. On a subsequent observation, the welder was noted as continuing the repair welding and between passes the QC Inspector verified the welding parameters and surface temperatures utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempilstik Heat Indicators for verifying the preheat and inter-pass temperatures. This QA Inspector noted that the electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. This QA Inspector noted that the work by Mr. Jimenez was in progress and appeared to be in general conformance with the contract documents.

13E PP121.2 (Exterior)

This QA Inspector randomly observed QC Inspector Steve McConnell performing Ultrasonic Inspection (UT) on the completed weld along 13E PP121.2 of the Drop-In Panel. The Inspector was observed scanning from both sides of the weld as well as various angles to the axis and recorded four (4) rejectable indications located at y+560mm: 15mm in length and 17mm deep, y+615mm: 15mm in length and 18mm deep, y+1175mm: 25mm in length and 18mm deep and y+1110mm: 15mm in length and 18mm deep. This QA Inspector noted that the work at this location appeared to be in general conformance with the contract documents and SE-UT-D1.5-CT-100.

Summary of Conversations:

This QA Inspector met with QC Inspector Sal Merino pertaining to 13E Drop-In Panels progress and required testing for the shift.



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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910 , who represents the Office of Structural Materials for your project.

Inspected By:	Frey,Doug	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
